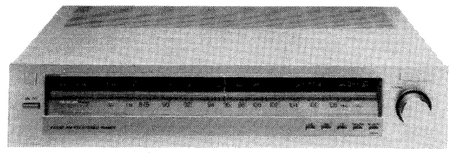
SERV. 8953

Service
Service
Service

Tuner F 2212

00/05/15



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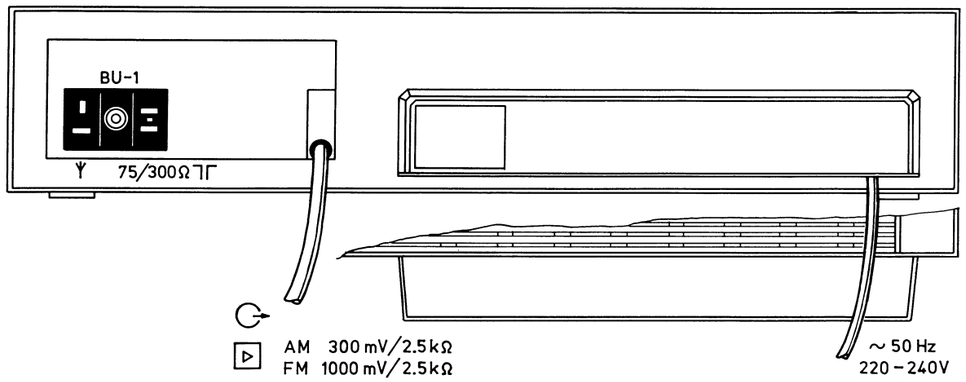
Service Manual



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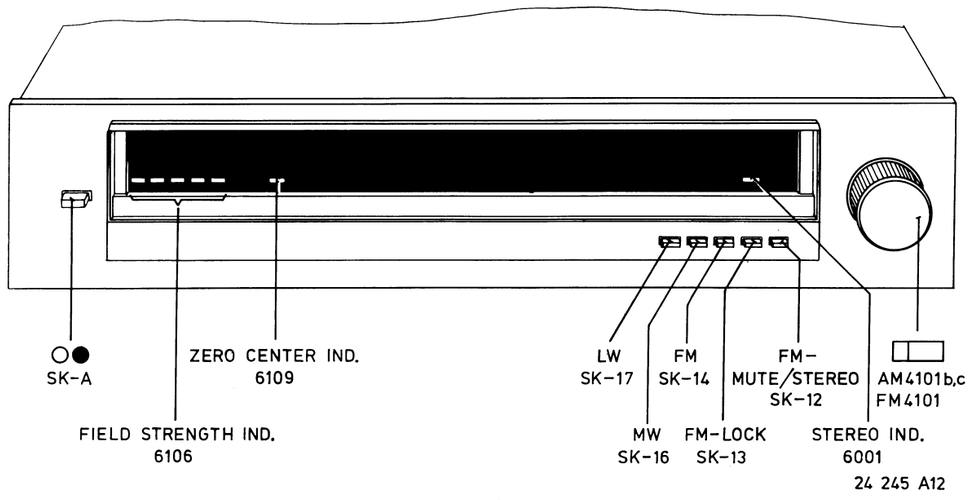

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(GB)
For more detailed technical specifications please consult commercial documentation.

(F)
Pour l'obtention de données techniques plus détaillées veuillez consultez la documentation commerciale.

(NL)
Voor meer uitgebreide technische specificaties gelieve de commerciele dokumentatie te raadplegen.

(D)
Für eine mehr detaillierte technische Spezifikation verweisen wir auf die kommerzielle Dokumentation.

(I)
In modo da ottenere dati tecnici piu particolareggiati, vi preghiamo di riferirvi alla documentazione commerciale.

(GB)
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

(F)
Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

(NL)
Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)
Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviço

Subject to modification
4822 725 14354
Printed in The Netherlands

PHILIPS

CS 77 445

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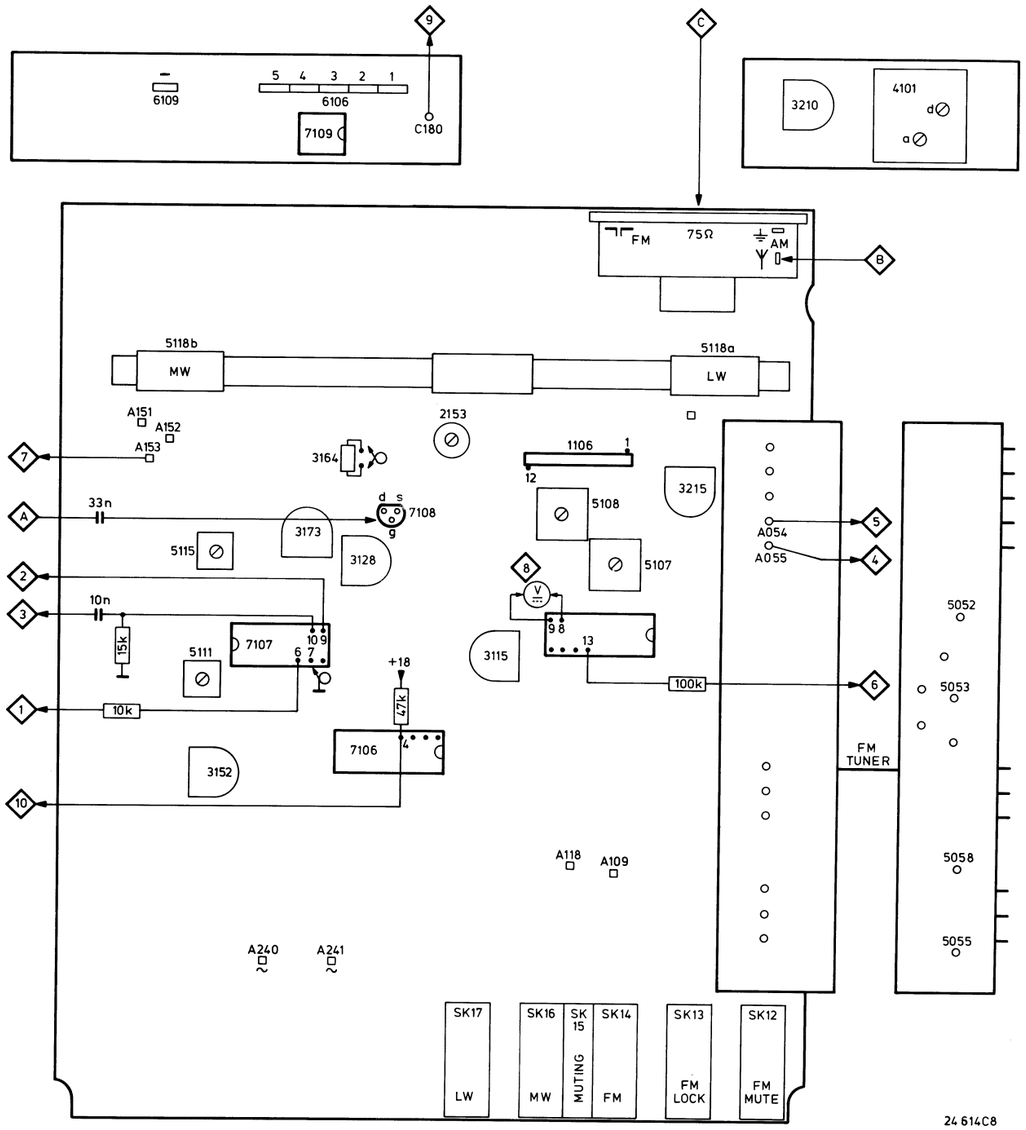


GB

1. Place the peak of the band-pass curve in the middle of the picture by shifting the sweep frequency.
2. Adjust for maximum height and symmetry.
3. Adjust for linearity and symmetry of the S-curve.
4. Connect point 4 IC7106 via 47 kΩ to +18.

NL

1. De top van de doorlaatkromme door verschuiven van de wobbelfrequentie in het midden van het scherm plaatsen.
2. Afregelen op maximum hoogte en symmetrie.
3. Afregelen op lineariteit en symmetrie van de S-kromme.
4. Punt 4 IC7106 aansluiten via 47 kΩ op +18.

CS 77 449

D

1. Die Spitze der Durchlasskurve in der Mitte des Bildes legen dadurch, dass man die Wobbelfrequenz verschiebt.
2. Abgleichen auf Maximalhöhe und Symmetrie.
3. Abgleichen auf Linearität und Symmetrie der S-Kurve.
4. Punkt 4 IC7106 anschliessen via 47 kΩ an +18.

F

1. Le top de la courbe de réponse doit être amené au centre de l'écran par glissement de la fréquence de modulation.
2. Ajuster sur hauteur et symétrie maximum.
3. Ajuster pour la linéarité et la symétrie de la courbe en S.
4. Raccorder le point 4 IC7106 à travers une résistance de 47 kΩ à +18.

| | | |

-MISCELLANEOUS-

1005-1006	Dial lamp 6.3 V 250 mA	4822 134 40446
1101	FM tuner	4822 210 10225
1106	Thi-Fi unit Tuning Volt. Gen. T.V.G.	4822 111 90057
4101	Varco-potm.	4822 158 60459
5001	Mains trafo	4822 146 60098
	Trafo fuse	4822 252 20007

-C-

2116	Elco Alum. 4.7 µF 25 V	4822 124 21054
2124	Micro poco 680 pF	5322 121 54174
2137	Micro poco 430 pF	5322 121 54129
2141	Elco Low Leak 2.2 µF 50 V	4822 121 50807
2143,2144	Micro poco 3.3 nF	5322 121 54049
2152	Micro poco 68 pF	4822 121 50563
2153	Trimmer 22 pF	4822 125 50045
2156	Micro poco 3.6 nF	4822 121 50088
2157	Micro poco 390 pF	5322 121 54128
2159	Micro poco 309 pF	4822 121 50628
2162	Micro poco 294 pF	4822 121 50617

-L-

5051		4822 146 40267
5052		4822 157 51065
5053,5055		4822 157 51171
5057	0.47 µH	4822 157 50967
5058		4822 153 50206
5101,5102, 5103	Cer. resonator 10.7 MHz	4822 242 70355
5107,5108		4822 153 50235
5109	1 MH	4822 157 50975
5111		4822 156 30767
5112	Cer. resonator 468 kHz	4822 242 70275
5112	Cer. resonator 452 kHz	4822 266 20069
5115		4822 157 51255
5117	114 kHz	4822 156 20743
5118	Ferroceptor	4822 158 60457
5120,5121	Low pass filter	4822 158 60464
5125	Choke 100 µH	4822 157 50964

-R-

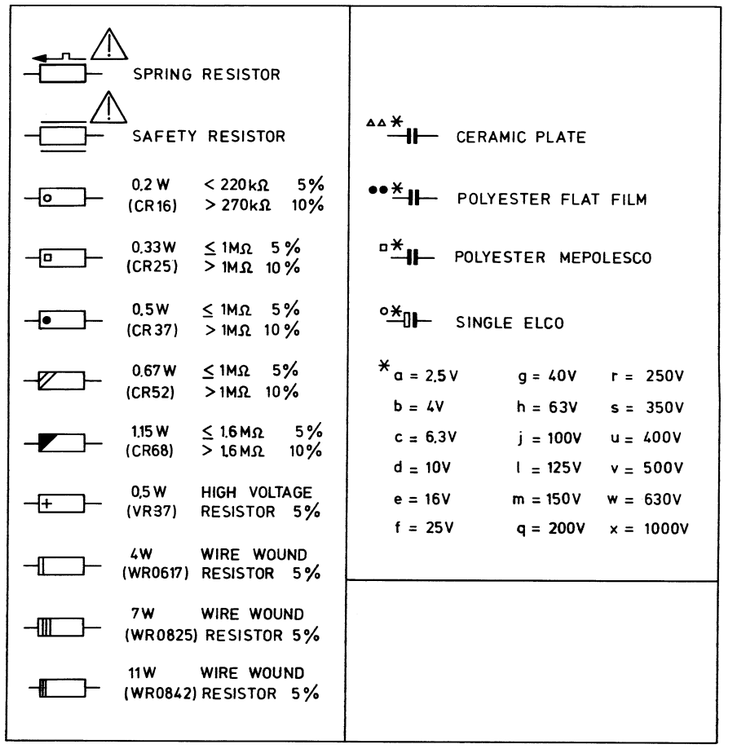
3115,3152 3173,3215	Trim potm. 10 kΩ	4822 100 10035
3122,3180	Safe res. 47 Ω	4822 111 30526
3128	Trim potm. 22 k	4822 100 10051
3134,3176	Safe res. 39 Ω	4822 111 30524
3210	Trim potm. 470 kΩ	4822 100 10107
3220	Safe res. 1 Ω	4822 111 30483

-D-

6001	LED green SLP251B	4822 130 31461
6052,6053	BB204B	4822 130 34449
6055	BB204G	5322 130 34825
6056	BZX75-C1V4	4822 130 34047
6101,6103	1N4148	4822 130 30621
6106	LED array SLP252B-06	4822 130 31459
6109	LED green SLP251B	4822 130 31461
6111,6112	BAW62	4822 130 30613
6113,6114	BZX79-B8V2	4822 130 34382
6130-6133	BAX14	4822 130 34193
6134-6136	1N4148	4822 130 30621

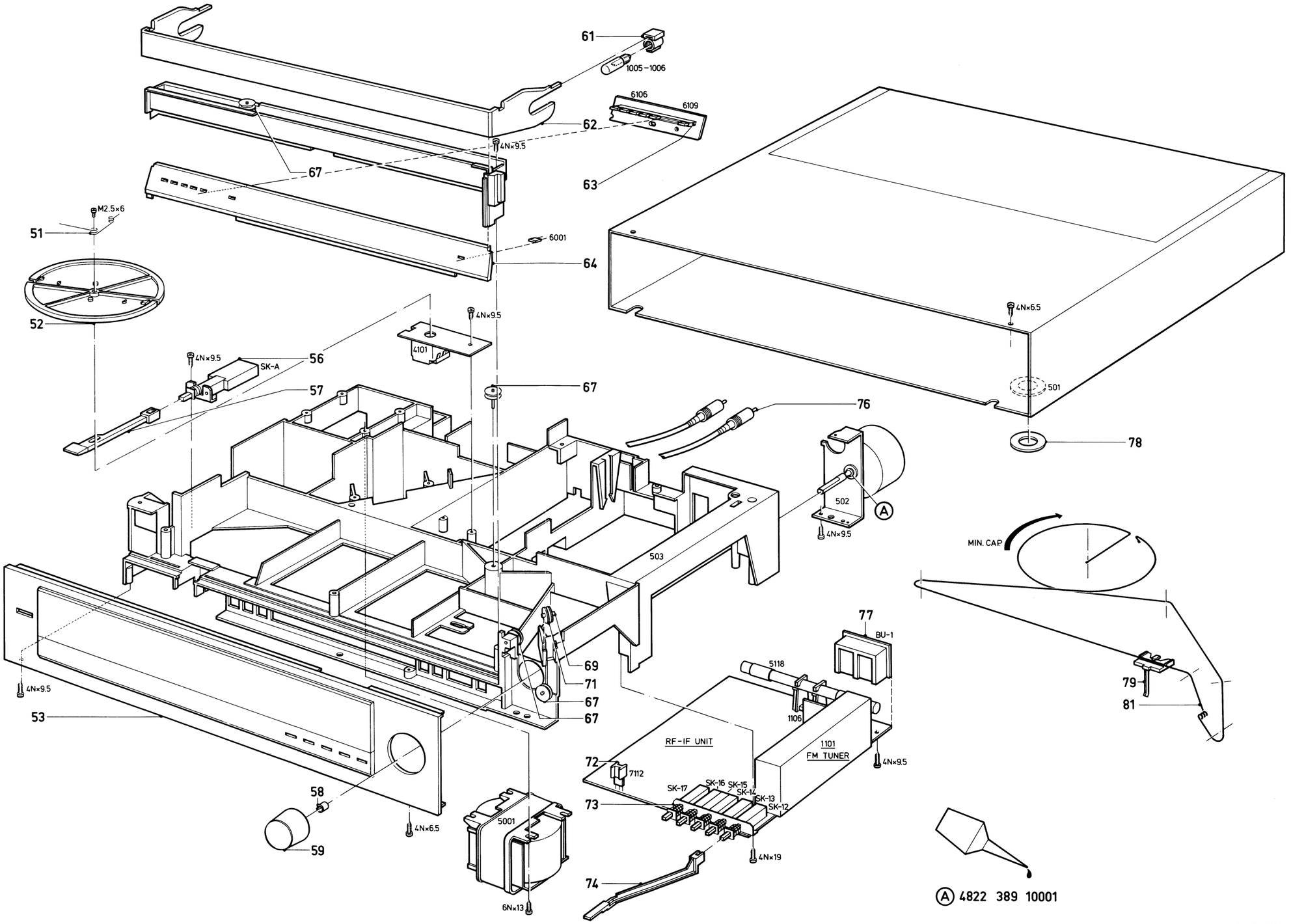
-IC-

7051	3SK74-L	4822 130 41603
7052	BF494	4822 130 44195
7053	BF241	4822 130 40898
7101,7102	BF494	4822 130 44195
7105	TDA1576	4822 209 80872
7106	TDA1578	4822 209 80873
7107	TDA1072	4822 209 80754
7108	BF245C	4822 130 41065
7109	U244B	4822 130 31415
7112	NJM78M18A	4822 209 80675
7113,7114, 7116,7117	BC548	4822 130 40938
7115	BC558	4822 130 40941


SPRING RESISTOR
SAFETY RESISTOR
0,2 W (CR16) < 220kΩ 5% > 270kΩ 10%
0,33W (CR25) ≤ 1MΩ 5% > 1MΩ 10%
0,5W (CR37) ≤ 1MΩ 5% > 1MΩ 10%
0,67W (CR52) ≤ 1MΩ 5% > 1MΩ 10%
1,15W (CR68) ≤ 1,6MΩ 5% > 1,6MΩ 10%
0,5W (VR37) HIGH VOLTAGE RESISTOR 5%
4W (WR0617) WIRE WOUND RESISTOR 5%
7W (WR0825) WIRE WOUND RESISTOR 5%
11W (WR0842) WIRE WOUND RESISTOR 5%
CERAMIC PLATE
POLYESTER FLAT FILM
POLYESTER MEPOLESCO
SINGLE ELCO
* a = 2,5V g = 40V r = 250V
b = 4V h = 63V s = 350V
c = 6,3V j = 100V u = 400V
d = 10V l = 125V v = 500V
e = 16V m = 150V w = 630V
f = 25V q = 200V x = 1000V

20716B20

51	4822 492 31667	
52	4822 528 80847	
53	4822 426 50495	
53-/28	4822 454 10964	
56	4822 276 10807	
57	4822 410 40254	
58	4822 492 60268	
59	4822 413 40987	
61	4822 255 10151	
62	4822 454 10941	
63	4822 255 40226	
64	4822 466 70439	
67	4822 528 80802	
69	4822 535 91151	
71	4822 528 80156	
72	4822 255 40232	
73	4822 276 50271	
74	4822 410 40253	
76	4822 321 20482	
77	4822 265 40145	
78	4822 462 40409	
79	4822 450 80712	
81	4822 321 30213	



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| | | |

FM-IF

SK-							
FM SK-14 FM man. SK-1 FM lock off SK-13 FM mute off SK-12	98 MHz ▲F 250 kHz (sweep range 75-110 MHz)	C	4101				◇4 4.1 V ± 30 mV
						◇6 1	
					5058 5053 5052	◇6 2	
	98 MHz 1 mV ▲F 75 kHz			3112	5107	◇7 3	
					5108		
	98 MHz				5108		◇8 0 V ± 50 mV

FM-RF

SK-							
FM SK-14 FM man. SK-1	108.4 MHz + 1 kHz mod.	C	max A B C C		5055	◇6 Max.	
FM lock off SK-13	87.2 MHz + 1 kHz mod.		A		3215		
FM mute off SK-12	95 MHz + 1 kHz mod.		B		3210		

A.G.C./FIELDSTRENGTH IND.

SK-							
FM SK-14 FM man. SK-1 FM mute off SK-12 FM lock off SK-13	98 MHz 0.5 mV	C			3115		◇5 A.G.C. 6 V
					3173		◇9 1.05 V All LED's on

STEREO DECODER

SK-							
FM SK-14 FM man. SK-1 FM stereo on SK-12 LM lock off SK-13	98 MHz 0.5 mV 1 kHz mod. R= 90% mod. L= 0 9% pilot.	C			3128	◇7 Min.	
	No signal				3152		◇4 Counter 76 kHz ± 1 kHz 4

AM-IF

SK-							
MW-SK-16	452/468 kHz via 33 nF (sweeprange 0.4-0.5 kHz)	A	4101 Max. Cap.	7. IC7107 3164			
						1 ◇1	
					5111	◇1 2	

AM-RF

LW SK-17	147 kHz + 1 kHz mod.	◇A	4101 Max. cap.		5115	◇1 Max.	
MW SK-16	1635 kHz + 1 kHz mod.	◇A	4101 Min. cap.		4101d	◇1 Max.	
LW SK-17	155 kHz + 1 kHz mod.	◇B			5118a		
	250 kHz + 1 kHz mod.				2153		◇2 Max.
MW SK-16	560 kHz + 1 kHz mod.				5118b		
	1500 kHz + 1 kHz mod.				4101a		

★ **AM-RF** $f_{osc} = f_{RF} + f_{IF}$

				10 IC7107 15 kΩ		◇3 Counter via 10 nF	